

WHAT IS CLAIMED IS:

- 1 1. A directory gatekeeper for performing alternate routing of calls through a plurality
2 of gateway resources, the directory gatekeeper comprising:
3 one or more communication devices providing access to a plurality of resource
4 management gatekeepers, each resource management gatekeeper associated with one or more
5 of the plurality of gateway resources;
6 a memory device storing a list of routes wherein each route is associated with one of
7 the plurality of resource management gatekeepers; and
8 a processor operable to receive a request through the one or more communication
9 devices,
10 wherein in response to a received request, the processor performs alternate routing by
11 selecting a route from the list of routes using the corresponding resource management
12 gatekeeper to determine resource availability.
- 1 2. The directory gatekeeper of claim 1, wherein one of the one or more
2 communication devices provides access to a packet-based network.
- 1 3. The directory gatekeeper of claim 2, wherein the packet-based network is an
2 Internet protocol (IP) network.
- 1 4. The directory gatekeeper of claim 1, wherein the one or more communication
2 devices provides access to the public switched telephone network (PSTN).
- 1 5. The directory gatekeeper of claim 1, wherein performing alternate routing of calls
2 includes:
3 identifying one or more candidate routes based on the received request; and
4 for each of the one or more candidate routes,
5 selecting a candidate route from the one or more candidate routes;
6 determining if the selected candidate route is available; and
7 if the selected candidate route is available, sending a response to the received
8 request indicating that the candidate route is available.

1 6. The directory gatekeeper of claim 5, wherein performing alternate routing of calls
2 further includes:

3 if none of the candidate routes are available, sending a response to the received
4 request indicating that the request can not be completed.

1 7. The directory gatekeeper of claim 5, wherein selecting a candidate route from the
2 one or more candidate routes includes selecting the least cost route as the candidate route.

1 8. The directory gatekeeper of claim 5, wherein selecting a candidate route from the
2 one or more candidate routes includes selecting a candidate route from the one or more
3 candidate routes at a predetermined ratio.

1 9. The directory gatekeeper of claim 8, wherein the predetermined ratio is selected
2 such that the likelihood of choosing each of the one or more candidate routes is substantially
3 equal.

1 10. A method for performing alternate routing of calls in a directory gatekeeper, the
2 method comprising:

3 receiving a request to initiate a call;
4 determining a list of possible routes for terminating the call;
5 if a route is available, selecting a route from the list of possible routes by querying
6 one or more resource management gatekeepers;

7 if a route is available, sending a response to the received request to initiate a call
8 indicating the selected route; and

9 if a route is not available, sending a response to the received request to initiate a call
10 indicating that the request will not be completed.

1 11. The method of claim 10, wherein the request includes a telephone number.

1 12. The method of claim 11, wherein the number includes a numbering plan area
2 (NPA).

1 13. The method of claim 10, wherein the request to initiate a call is an H.323
2 admission request (ARQ) message.

1 14. The method of claim 10, wherein each route in the list of routes is associated
2 with a resource management gatekeeper.

1 15. The method of claim 14, wherein the step of selecting a route from the list of
2 possible routes by querying one or more resource management gatekeepers includes:
3 for each route in the list of possible routes,
4 selecting a candidate route from the list of possible routes; and
5 determining if the selected candidate route is available.

1 16. The method of claim 15, wherein selecting a candidate route from list of possible
2 routes includes selecting the least cost route as the candidate route.

1 17. The method of claim 15, wherein selecting a candidate route from the list of
2 possible routes includes selecting a candidate route from the list of possible routes at a
3 predetermined ratio.

1 18. The method of claim 17, wherein the predetermined ratio is selected such that the
2 likelihood of choosing each of the one or more candidate routes is substantially equal.

1 19. A computer-readable medium including software for performing alternate routing
2 of calls through a plurality of gateway resources, the software configuring a computer to
3 performing a method, the method including:
4 receiving a request to initiate a call;
5 determining a list of possible routes for terminating the call;
6 if a route is available, selecting a route from the list of possible routes by querying
7 one or more resource management gatekeepers;
8 if a route is available, sending a response to the received request to initiate a call
9 indicating the selected route; and

10 if a route is not available, sending a response to the received request to initiate a call
11 indicating that the request will not be completed.

1 20. The computer-readable medium of claim 19, wherein the request includes a
2 telephone number.

1 21. The computer-readable medium of claim 20, wherein the number includes a
2 numbering plan area (NPA).

1 22. The computer-readable medium of claim 19, wherein the request to initiate a call
2 is an H.323 admission request (ARQ) message.

1 23. The computer-readable medium of claim 19, wherein each route in the list of
2 routes is associated with a resource management gatekeeper.